



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
Budget Development, Planning and Administration
State Planning Coordination

October 22, 2008

John Van Sickle
Davis, Bowen & Friedel, Inc.
23 North Walnut Street
P.O. Box 809
Milford, De 19963

RE: PLUS review – 2008-09-01; Shipbuilders, LLC

Dear Mr. Van Sickle:

Thank you for meeting with State agency planners on September 24, 2008 to discuss the proposed plans for the Shipbuilders project to be located on the west side of Route 213 just outside the Town limits of Ellendale.

According to the information received, you are seeking a rezoning of 141.09 acres from AR-1 & GR to MR/RPC for 303 residential units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- The proposed application is located within an Investment Levels 2, 3 and 4 according to the State Strategies for Policy and Spending seeks a rezoning of 141.09 acres from AR-1 & GR to MR/RPC for 303 residential units within Sussex County. In addition, the applicant is working closely with the Town of Ellendale to consider possible future annexation as part of the Town's process to updates its 2004 Comprehensive Land Use Plan.

Street Design and Transportation

- 1) DelDOT is pleased to see that sidewalks are proposed. They recommend that those sidewalks be extended north along Old State Road to Willow and Pin Oak Streets, with cross-walks there and at State Street. Even if this development is not annexed, it will function as part of Ellendale.
- 2) DelDOT recommends that the two long cul-de-sacs in the northeast quadrant of the development be connected to form a loop.
- 3) Traffic calming will likely be needed for the long straight street at the east edge of the single-family detached house section. DelDOT recommends that traffic calming be included in the design of the development to avoid the need for retrofitting later.

Natural and Cultural Resources

- A significant portion of this parcel contains poorly to very poorly-drained hydric Hurlock, Askecksy, Corsica, and Mullica soils (approximately 80%). Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or "nor'easters." This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (e.g., rooftops, roads, sidewalks, and stormwater management structures).
- Designate all wetland buffers as un-subdivided open space. No portion of any building lot should be within the buffers. During prolonged wet periods, the wetland buffers may become too wet for normal residential use. Designation as open space will aid in the prevention of decks, sheds, fences, kennels, and backyards being placed within the buffers thereby reducing nuisance drainage complaints.

- Excessive tree removal in the southern portion of this project may contribute to drainage problems and require additional stormwater management measures. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.
- DNREC Recommends omission of some lots and infrastructure that will require tree clearing is recommended. It appears as if Lot #s 18-27 and 124, 125 in the southern portion of the project area will require tree clearing. There are also 50+/- lots and infrastructure in the northern half of the project area that will result in tree clearing.
- Several stormwater management ponds will result in tree clearing. DNREC recommends that the applicant explore alternative methods of stormwater management or alternative locations that won't require tree clearing.

This office has received the following comments from State agencies:

Office of State Planning Coordination – Contact: Bryan Hall 739-3090

The proposed application is located within an Investment Levels 2, 3 and 4 according to the State Strategies for Policy and Spending seeks a rezoning of 141.09 acres from AR-1 & GR to MR/RPC for 303 residential units within Sussex County. In addition, the applicant is working closely with the Town of Ellendale to consider possible future annexation as part of the Town's process to updates its 2004 Comprehensive Land Use Plan.

The Office of State Planning has not objection to the rezoning as part of both the Town's or County's Comprehensive Land Use Plans Update Process. This office would ask the applicant to review the additional comments to further improve the overall project as presented.

State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685

No comments received

Department of Transportation – Contact: Bill Brockenbrough 760-2109

A different plan for this site was presented at PLUS on March 5, 2008, and DelDOT has not received a response to their comments from that meeting. Therefore DelDOT will necessarily repeat some of their comments from that meeting. Has an application been filed with Sussex County? DelDOT revised its subdivision street and access regulations in late 2007. Grandfathering provisions will allow use of the previous regulations in cases where an application has been filed with the relevant government and accepted for review by that local government on or before March 31, 2008.

- 4) A traffic impact study was completed for the development of this property under the name Walker Property in 2005. At that time, the proposed use was 358 single-family detached houses. A copy of our consultant's August 16, 2005, review letter in that regard is available on request. While the technical details in the study and the review could be updated to reflect the passage of time and the change in the size of the development, DelDOT does not believe it would change the conclusions of either document. If the County, the Town or the developer find that an update of the study is necessary, DelDOT is willing to review an updated report. Absent such an update, we will proceed on the basis of the 2005 review letter.
- 5) DelDOT is pleased to see that sidewalks are proposed. They recommend that those sidewalks be extended north along Old State Road to Willow and Pin Oak Streets, with cross-walks there and at State Street. Even if this development is not annexed, it will function as part of Ellendale.
- 6) DelDOT recommends that the two long cul-de-sacs in the northeast quadrant of the development be connected to form a loop. If a vehicular connection is not possible, a pedestrian path should be provided. See Chapter 3 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access for further information regarding our requirements for internal connectivity.
- 7) Traffic calming will likely be needed for the long straight street at the east edge of the single-family detached house section. DelDOT recommends that traffic calming be included in the design of the development to avoid the need for retrofitting later. DelDOT's Traffic Calming Design Manual may be of assistance in this regard.
- 8) The developer's site engineer should contact the DelDOT Subdivision Manager for western Sussex County, Mr. Derek Sapp, to determine specific requirements. Mr. Sapp may be reached at (302) 760-4803.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Green Infrastructure

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special State conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will

support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

Soils

According to the NRCS soil survey update, Rosedale (RoA), Klej (KsA), Hurlock (HuA), Askeckys (AsA), Mullica (MmA), and Corsica (CoA) were mapped in the immediate vicinity of the proposed construction area (Figure 1). Rosedale is a well-drained upland soil that generally, has few limitations for development. Klej is a somewhat poorly-drained transitional soil that is likely to have both upland and wetland soil components. Hurlock, Askecksy, Corsica, and Mullica are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development. Approximately 80 percent of mapped soils in the proposed project area were mapped as Hurlock, Askecksy, Mullica, or Corsica; these soils, as mentioned previously, have severe limitations for development and should be avoided.

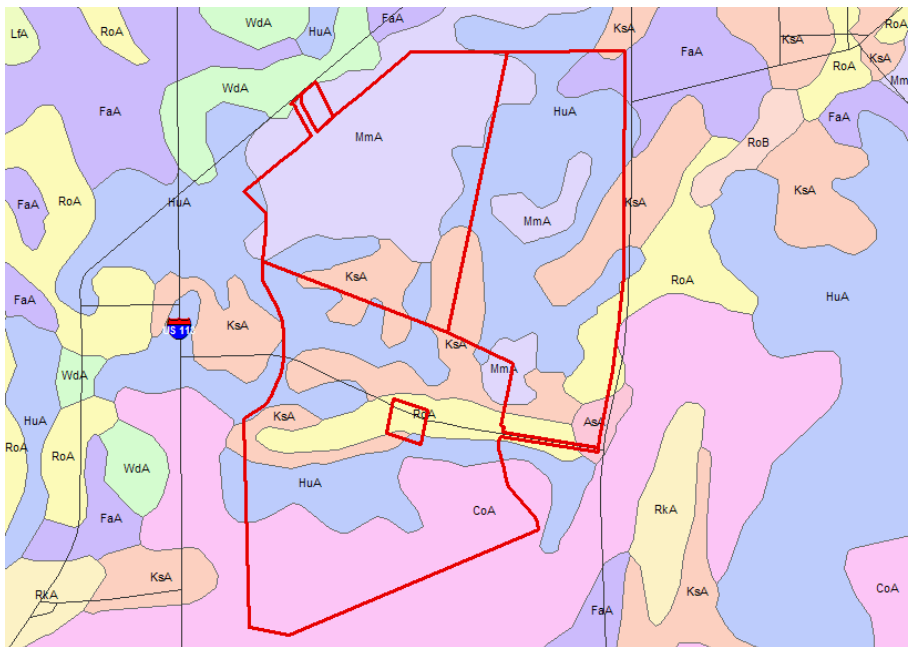
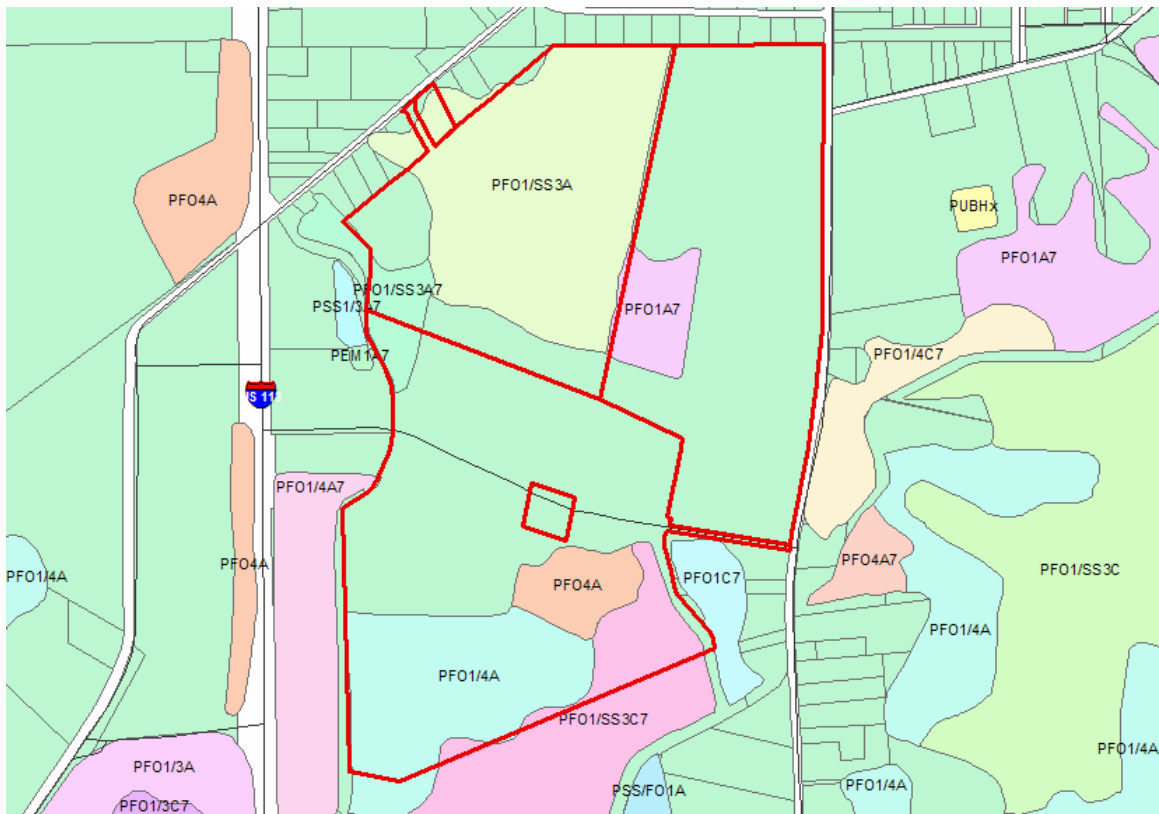


Figure 1: NRCS soil survey update mapping of lands in the immediate vicinity of Shipbuilders, LLC.

Wetlands

Please Note: Although the mapped occurrence of wetlands is less extensive than the mapped occurrence of hydric soils (i.e., Hurlock, Askecksy, Mullica, and Corsica), this in no way negates the reality that wetland conditions still probably exist regardless of the fact that the native wetland vegetation has been removed.



There appear to be two blue line streams on the east and west side west sides of the property that the developer is not disturbing and maintaining a 50 foot wide buffer. As long as the developer is not doing any construction work in the blue line streams they should be OK with the Wetlands and Subaqueous Lands office. The SWMP map does show a large area of forested wetlands on the property. Prior to issuing any approvals the

applicant should have the wetlands delineated and the delineation verified by the Army Corps of Engineers.

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is the only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations ultimately rests with the Corps; they can be reached by phone at 736-9763.

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section

recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands. DNREC strongly encourage a 100-foot upland buffer from all reaches of the Ellendale ditch system.

As mentioned previously, a significant portion of this parcel contains poorly to very poorly-drained hydric Hurlock, Askecksy, Corsica, and Mullica soils (approximately 80%). Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (e.g., rooftops, roads, sidewalks, and stormwater management structures).

Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed. Soils mapped as Hurlock, Askecksy, Corsica, and Mullica fit the criterion for improper drainage or high flooding potential, and should be avoided. The Watershed Assessment Section believes permitting development on such soils would be inconsistent with above-mentioned regulatory guidelines in the Sussex County Code.

Impervious Cover

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed’s overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of this project’s most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters of the greater Nanticoke watershed, and designated as having waters of Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware’s “Surface Water Quality Standards” (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a “pollution control strategy” to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the

Department to mandate BMPs to meet standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Gravelly Branch watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Gravelly Branch watershed, “target-rate-nutrient reductions” of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, “target-rate-reductions” of 2 percent will be required for bacteria.

TMDL Compliance through the PCS

As indicated above, TMDLs for nitrogen and phosphorus have been proposed for the Gravelly Branch watershed. The TMDL calls for a 30 and 50 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria. A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of BMPs such as wider vegetated buffers along watercourses/wetlands, increasing the amount of passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, and deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The information provided indicates that Artesian Water Company will provide well water to the proposed project(s) through a public water system. DNREC files reflect that Artesian Water Company does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-736-7547. Since an on-site public well will be needed, a minimum isolation distance of 150 ft. is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area, furthermore, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all

requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures that sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.
- Include Brooks Cahall, of the Drainage Program, in the pre-application meeting with the Sussex Conservation District to discuss drainage, stormwater management, tax ditch maintenance, and the release of stormwater into the tax ditch. Show the location and width of tax ditch rights-of-way on the sediment and stormwater plans.

Drainage

- This project is located within the Ellendale Tax Ditch. The placement of permanent obstructions within tax ditch rights-of-way is prohibited. Any change to the location of the tax ditch, or the existing tax ditch rights-of-way, will require a change to the Ellendale Tax Ditch court order. Please contact Brooks Cahall of the Drainage Program to resolve the issues with the tax ditch. It is suggested to include Brooks Cahall in the pre-application meeting with the Sussex Conservation District to discuss drainage, stormwater management, tax ditch maintenance, and the release of stormwater into the tax ditch.
- There is a potential issue of tax ditch maintenance on the one proposed private crossings on Prong 8 of the Ellendale Tax Ditch.
- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.
- Designate all wetland buffers as un-subdivided open space. No portion of any building lot should be within the buffers. During prolonged wet periods, the wetland buffers may become too wet for normal residential use. Designation as open space will aid in the prevention of decks, sheds, fences, kennels, and backyards being placed within the buffers thereby reducing nuisance drainage complaints.
- Excessive tree removal in the southern portion of this project may contribute to drainage problems and require additional stormwater management measures. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

Rare Species

DNREC has never surveyed the project area; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site. However, State-endangered *Melanerpes erthrocephalus* (Red-headed Woodpecker),

State-rare Virginia valeriae (smooth earth snake), State-rare Styrium liprarops strigosum (striped hairstreak) and State-rare Atrytonopsis hianna (dusted skipper) occur in a forest block just east of this site and they could occur within the project area as well.

Site Survey Request

In order to provide more informed comments, our program staff requests a site visit of the project area. This site visit would be conducted at no cost or liability to the landowner/developer and would aid in the review of this project. Data collected would also aid in their efforts to map vegetative communities throughout the State. Please note that DNREC scientists have extensive knowledge of the State's flora and fauna and are the most qualified to utilize our comprehensive survey methods. A report of the findings would be generated and could be used by the applicant in the planning of this project.

Please contact Edna Stetzar, Environmental Review Coordinator, at (302) 653-2880 ext. 101 or Edna.Stetzar@state.de.us

Forested Wildlife Habitat

This site plan is an improvement over the previous application and will result in larger, connected areas within the forest block, especially in the southern part of the project area where there is a connection to forest on adjacent properties. However, the amount of forested habitat loss being proposed is still the same (24 out of 65 acres of forest). In addition, according to State Wetland maps, a large part of the forested area contains wetlands which can support an array of plant and animal species. Upland buffers around these wetlands provide critical habitat for wetland dependent species and are important for maintaining the function and integrity of the wetlands. There are both lots and infrastructure within 100 feet of these wetlands, which could result in impacts due to inadequate buffers.

Cumulative wildlife habitat loss throughout the State is of utmost concern to the Division of Fish and Wildlife, which is responsible for conserving and managing the State's wildlife (see www.fw.delaware.gov and the Delaware Code, Title 7). Because of an overall lack of State, county and local forest protection, we have to rely on landowners/developers and/or the entity that approves projects (i.e. counties and municipalities) to consider implementing recommendations that will aid in reducing forest loss.

Recommendations:

1. It is recommended that consideration for preservation of the forest be made. There are incentive-based programs for wildlife management available to private landowners through our agency. Please contact Shelley Tovell at (302) 735-3605 if the landowner(s) is interested in more information.

If preservation is not going to be considered they recommend the following:

2. Omission of some lots and infrastructure that will require tree clearing is recommended. It appears as if Lot #s 18-27 and 124, 125 in the southern portion of the project area will require tree clearing. There are also 50+/- lots and infrastructure in the northern half of the project area that will result in tree clearing.
3. Several stormwater management ponds will result in tree clearing. DNREC recommends that the applicant explore alternative methods of stormwater management or alternative locations that won't require tree clearing.
4. There are lots and infrastructure within 100 feet of wetlands. We highly recommend that upland buffers around wetlands be at least 100 feet in width. Lot lines should not be within this buffer zone. County and local buffer width requirements do not appear to recognize scientific research which supports the need for 100-foot wetland buffers for adequate protection of water quality.
5. DNREC recommends trees not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.

Plant Rescue

Since woodlands are going to be cleared and fragmented and wetlands are going to be impacted by inadequate buffers, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact William A. McAvoy at (302) 653-2883, (william.mcavoy@state.de.us).

Nuisance Waterfowl

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however,

with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recommendation:

1. DNREC recommends plantings of native species of tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to congregate and nest in the area of the pond.

At this time, DNREC does not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the homeowners association or land manager.

Recreation

In May and June of 2008, the Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings will be the foundation of the 2008-2011 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. Ninety-one percent of eastern Sussex County residents indicated that outdoor recreation was very or somewhat important to them. Because of the importance of outdoor recreation in Sussex County, the dedication of parkland to the Town of Ellendale is appreciated.

Site Investigation and Restoration

No SIRB sites or salvage yards were found within a ½-mile radius of the proposed development. However, based on the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Under/Aboveground Storage Tanks

There are no LUST sites located within a quarter mile from the proposed project. However, should any underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and

the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials will have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

Air Quality

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Shipbuilders development may have.

Emissions Attributable to Shipbuilders Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Direct Residential	9.4	1.0	0.9	1.1	38.0
Electrical Power Generation	ND*	3.7	12.9	ND*	1,907.1
Mobile	23.3	19.3	14.2	1.3	1,945.1
Total	32.7	24.0	28.0	2.4	3,890.2

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

Recommendations:

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

Regulation 6 - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> • Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Using covers on trucks that transport material to and from site to prevent visible emissions.
Regulation 1113 – Open Burning	<ul style="list-style-type: none"> • Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibiting the burning of land clearing debris. • Prohibiting the burning of trash or building materials/debris.
Regulation 1145 – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> • Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.

- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Shipbuilders development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- a. **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
 - Where a water distribution system is proposed for single family and townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Fire Protection Features:**

- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan

c. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare must be constructed so fire department apparatus may negotiate it. . If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. Gas **Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

e. Required **Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Townhouse 2-hr separation wall details shall be shown on site plans
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Scott Blaier 739-4811

The Delaware Department of Agriculture has no objections to the portion of the project located in Investment Levels 2 and 3, as designated by the *Strategies for State Policies and Spending*. However, the Department does object to the portion of the proposed development located in Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support development in this area. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware's resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. We oppose the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.

Section 1. Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

G. Agricultural Use Protections.

- (1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:
 - (a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for

agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

“This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities.”

(b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

This site overlaps with the State’s Green Infrastructure Investment Strategy Plan. This designation indicates the land has valuable agricultural and environmental characteristics which are discussed in Governor Minner’s Executive Order Number 61. They should be preserved as such, and not developed for residential or other incompatible uses.

The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Do Not Plant List

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear
Leyland Cypress
Red Oak (except for Willow Oak)
Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware Division of Public Health- Health Promotion Bureau- contact Michelle Eichinger (302) 744-1011

Ensuring that new residential and commercial development incorporates pedestrian- and bicycle-friendly features allows people to travel by foot or by bicycle and promotes physical activity as part of daily routines. Regular physical activity offers a number of health benefits, including maintenance of weight and prevention of heart disease, type 2 diabetes and other chronic diseases.¹ Research shows that incorporating physical activity into daily routines has the potential to be a more effective and sustainable public health strategy than structured exercise programs.² This is particularly important considering about 65% of adult Delawareans are either overweight or obese.³ This current obesity crisis is also affecting children. Approximately 37% of Delaware's children are overweight or obese⁴, which places them at risk for a range of health consequences that include abnormal cholesterol, high blood pressure, type 2 diabetes, asthma, depression and anxiety.¹

In Delaware, as in other states across the nation, certain patterns of land use can act as a barrier to physical activity and healthy eating for children and adults alike. Examples of such barriers include neighborhoods constructed without sidewalks or parks and shopping centers with full-service grocery stores situated too far from residential areas to allow for walking or biking between them.

DPH supports new development in and around existing towns and municipalities where compact and mixed land use patterns facilitate physical activity.

¹ Nemours Health and Prevention Services (2005). *Delaware Children's Health Chartbook*, Newark, DE.

² Active Living by Design. *Transportation Fact Sheet*. Retrieved May 17, 2007, from http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pdf.

³ Delaware Health and Social Services (2008), *Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS), 1990-2007*.

⁴ Nemours Health and Prevention Services (2007). *2006 Delaware Survey of Children's Health Descriptive Statistics Summary, Volume 1*.

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a rezoning and site plan review of 303 residential units on 141 acres, located east of Route 13, west side of County Road 213, 118 feet south of Cherry Street, near Ellendale. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 and 3 area. DSHA supports this proposal because residents will have proximity to existing services, markets, and employment opportunities. Furthermore, the proposal targets units for first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA shows the median home price in Sussex County to be \$260,000. However, households earning respectively 100% of Sussex County's median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$95,209. DSHA applauds and supports the developer's participation in Sussex County's MPHU program. Households that cannot afford to live in the coastal resort area have been displaced to western Sussex County. The MPHU program provides housing opportunities to those households to live and work in eastern Sussex County.

Department of Education – Contact: John Marinucci 735-4055

No comments received.

Sussex County – Contact: Richard Kautz 855-7878

Like the single family units, the 23 Townhouse units should be distributed within the townhouse portion of the development and not concentrated within just the four buildings.

The preliminary subdivision plat should provide details of how/when the required forested buffer will be planted.

The Sussex County Engineer Comments:

Parcels 115 and 122 of the proposed project are within the boundary of the Ellendale Sanitary Sewer District and connection to the sewer system is mandatory. The remaining parcels adjoin the existing sewer district and Sussex County will consider annexing the parcels into the sewer district following completion of certain administrative procedures. The project is within planning study and design assumptions for sewer service. In addition, we recommend the developer contact the Town Of Ellendale for annexation into the town.

The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. Conformity with the Ellendale Treatment and Disposal Options report is also required. The Sussex County Engineer must approve the connection point. The Sussex County Engineering Department requires that a Sewer Concept Plan be submitted for the whole project for review and approval prior to requesting annexation into the Ellendale Sanitary Sewer District. Attached is a checklist for preparing conceptual plans. Also attached is the County's policy and steps for extending sewer district boundaries.

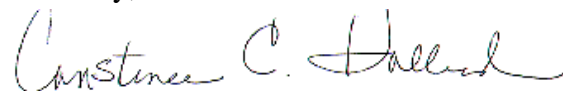
One time system connection charges will apply. Please contact Ms. Blair Lutz at 302 855-7801 for additional information on charges.

Sussex County recently adopted new road standards. The standard becomes affective January 1, 2009 and will apply to this project.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script, reading "Constance C. Holland".

Constance C. Holland, AICP, Director
Office of State Planning Coordination

CC: Sussex County